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ABSTRACT

Students enrolled in the Freshman English Core at the University of Denver take a required course called "The Persuasive Voice" (PV), designed to teach basic library and research skills. Members of the library faculty received a grant to make basic World Wide Web-based instructional materials available via the library home page; the initial objective of the project was to provide instructional support to faculty, staff, and students involved in the PV. This initial bibliographic instruction project has grown rapidly and is now particularly useful to working adult students enrolled in applied, interdisciplinary, evening and weekend programs. Through the library's home page, off-campus students can gain access to around-the-clock bibliographic assistance in accessing, using, and assessing the relevance and provenance of electronic resources. To measure and report on the effectiveness of the initial Web-based training project, a survey-based assessment tool was developed and administered in the PV classes. Results reflect a clear need for ongoing instruction on both the basic and advanced levels. (Contains 13 references.) (AEF)

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Web-Based Learning: Electronic Library Resources and Instruction

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Abstract

Virtual library support for distance learning and for non-traditional students is a growth area in academic libraries. Collaborative curriculum development between academic departments and infrastructure service units ensures that limited resources are implemented wisely and cost-effectively, and that students receive the guidance they need to develop the critical thinking skills that are essential for life-long learning.

Introduction

Remote access to electronic library materials is not particularly new, but the process of training remote users to utilize them effectively is. Library access is no longer bounded by a physical structure. Library information is available electronically through networks and consortial licensing agreements virtually around the clock. Although conducting library research no longer depends on the physical presence of library faculty and staff, students and faculty still need to know how to access and evaluate and use materials effectively. Instruction in the use of library is traditionally the provenance of the library's reference desk, or is available by appointment. In a virtual environment, where research is conducted remotely at times when reference support is not available, instruction librarians need to provide guidance to remote users that will enable them to use and evaluate information resources asynchronously at point-of-use. Currently, the World Wide Web is one of the best mediums for providing this guidance.

Academic librarians routinely grapple with the problem of how to provide training and help information users approach the research process critically. In today's environment students are increasingly non-residential, and more and more library materials are electronically licensed rather than physically owned. Here, instruction on demand, at point of use is necessary. Provision of bibliographic assistance is increasingly important as distance teaching and learning programs increase in number and scope, and initiatives like the Open University, the University of Phoenix, and the Western Governor's University explore options for establishing online libraries to support their curricula. In this setting, the strategic question of virtual library support becomes critical.

Collaborative curriculum development between academic departments and infrastructure service units is not regularly practiced, but it one way to ensure limited resources are utilized wisely and cost-effectively, and that they are of real benefit to the library's primary clientele. At the University of Denver, library and teaching faculty collaborate to instill critical thinking and information literacy skills in undergraduate students.

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The Persuasive Voice

Each Winter Quarter at DU, students enrolled in the Freshman English Core take a required course entitled *The Persuasive Voice* (ENGG 0122). This course is designed to teach basic library and research skills. One of the outcomes of the course is the development a problem- or issue-oriented casebook that documents the students' research process. This course is time-intensive for the instructors and librarians who team-teach the course, and for the library's public services staff who must organize and maintain needed materials.

1995–1997 was a period of tremendous change in the library. The transformation of Penrose included installation of a campus computing lab in the library, migration from the old text-based CARL system to a new Integrated Library System (ILS)[1] and web-based Public Access Catalog (WebPAC), along with a team-based restructuring of the library's organizational chart. In an effort to maintain business as usual in the face of change, with PV looming, members of the library reference faculty wrote a grant proposal to DU's Center for Teaching & Learning, asking for funding to make basic web-based instructional materials available via the Penrose Library home page: http://gus.penlib.du.edu. Funds were allocated, and $2400 was set aside to supplement the hourly contract of the library's part-time web-master,[2] who had agreed to work with the reference faculty to implement their instructional designs.

The initial objective of the project was to provide immediate instructional support to faculty, staff, and students involved in *The Persuasive Voice*. The underlying intent was more far reaching, however. If effective, the project could be used as a model for provision of web-based bibliographic instruction to all members of the university community, beginning with the Freshman Core and gradually progressing through discipline-based and graduate level research. The long-range goal is to prepare curricular and research support tools that will help prepare students to critically evaluate paper and electronic information resources of all kinds, and to mount these materials on the library's home page so that they can be accessed on demand, asynchronously, via desktop.

Instruction Central

The initial BI project has grown rapidly. It is now particularly useful to the working adult students enrolled in the applied, interdisciplinary, evening and weekend programs of the University College and the Women's College which constitute one-third of DU's enrollment. Students and faculty enrolled in these programs now have licensed access to full-text and full-content information resources through campus PPP/SLIP connections. By linking to *Library Use Training* on the library's home page, off-campus students can also gain access to *Instruction Central* that provides 24-hour/7-day-per week bibliographic assistance in accessing, using, and assessing the relevance and provenance of electronic resources. They can then select the resources that most closely match their needs. Because they are web-based, the tools are uniform in appearance and students experience little difficulty in navigating them. Dialog boxes and pull-down menus are standard conventions, although enhancements may vary. Use is intuitive at the basic level, and beginning users can focus on content rather than on the mechanics of the search process which are transparent to them. Advanced instruction is still available, individually or in the classroom, by appointment for students and faculty who wish to manipulate databases in a more sophisticated manner.

Initial training tutorials consisted of web-mounted PowerPoint presentations designed to assist students and faculty during the research process. They provided instructions, scope and content notes and provided direct links to the resources themselves. Topics covered included: *The Persuasive Voice, How to Search Dialog, How to Search Nexis,* and a *Basic Orientation to Library Research.* In the course of the last year these tutorials, like the library, have evolved. A list of *Frequently Asked Questions (FAQ's)* cuts across and complements a longer, more linear explanation of the research process. The self-guided tutorial contains hot links to charts and explanatory diagrams, and includes a *Glossary* along with representative screen shots. It also includes links to related concepts. Also included in the instructional section are presentations on: *How to Search the Library WebPac, How to Conduct Web-based Research through the Penrose Home Page,* and *How to Evaluate Your Results.* In addition, library subject specialists have mounted annotated guides to specific, discipline-based research literature that contain hypertext links to subscription-based web resources and guide users to other resources, both electronic and print, that can be used to enhance the research process. Links to system and vendor-based help pages are also available, along with Helpdesk documentation from the University Technology Services (UTS). Other enhancements to the library's home page which are designed to facilitate access to library materials and services to students outside the library include options for online book renewal, electronic reference, and electronic interlibrary loan. Pilot projects to test the feasibility of user-generated document delivery requests and electronic reserves have been initiated this summer. Plans for implementing real-audio and real-video streaming and voice-overs are currently under discussion.

Evaluation

To measure and report on the effectiveness of its initial web-based training project the library reference faculty, in cooperation with representatives of the university administration,[3] developed a survey-based assessment tool. Pre- and post-tests were designed to measure the effectiveness of library instruction and the retention of material presented in the Winter 1998 *Persuasive Voice* classes. Instructors administered the surveys first, pre-tests in the PV classes, then as a post-tests. Results reflect a clear need for ongoing instruction on both the basic and advanced levels. Most students had very little initial understanding of the organization or content of the traditional library resources available to them, not to mention the complexities of virtual information. Results of the post-test were disappointing in that the ideas that seemed clear to the instructors were not always made clear to the students, but results did indicate improved understanding of basic library and information concepts. At the very least, students now know that the scope of the material that exists, and are able to differentiate between the WWW and web-based resources provided through a mediating body, like the library.

Similar methodology has been adapted to measure effectiveness of other web-based teaching campus-wide. Assessment tools currently exist as voluntary response surveys mounted interactively on the web, using CGI-bin scripting. Effectiveness of the initial project is also being assessed through documented interactions at the reference desk, in-class interaction with students, and electronic feedback forms mounted on the library's home page. Statistical packages on the Penrose server track use, and provide information about which databases are most frequently opened, how they are accessed, and how they are used. This information will be invaluable in planning for future resource implementation and electronic resource allocation.

At this point, the library has an ongoing commitment to maintain useful, up-to-date web tools. Equipment and infrastructure are in place to maintain and sustain this effort. The library has purchased a new web server, funding has been earmarked to sustain contractual systems support staff, and the Penrose Web Master is now juggling several contracts in the library. In addition, the library's web team and systems staff have incorporated plans for future web-based instruction and training into the library's regular workflow.

Notes

1. Innovative Interfaces, Inc.

2. Paolo Bacigalupi.

3. Thomas Fry, Associate Director for Services & Planning, Penrose Library; Sheila Summers-Thompson, University of Denver, Office of Assessment; Margaret Whitt, Director of Undergraduate Studies, University of Denver, English Department.

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Autobiographical Sketch

Deborah S. Grealy is an Assistant Professor on the faculty of the Penrose Library, University of Denver. She is the Non-traditional Programs Librarian, and works primarily with the University College and the Women's College. She served as the University of Denver's Science Librarian from 1993-1997 and, prior to that, ran the GRI Natural Gas Supply Information Center at the Colorado School of Mines from 1990–1993. She spent five years as a technical librarian at Marathon Oil Company's Exploration & Production Technologies facility in Littleton, Colorado, and three years at the University of Oklahoma where she ran the Physics & Astronomy Branch Library. She received her MA from Kent State University, her MLS from the University of Oklahoma, and is currently a Ph.D. candidate in Higher Education at the University of Denver. She has written and presented on topics pertaining to information literacy and technology, reference service provision, staff development, and special libraries.

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